Ultra-Low-Power 3-in-1 Climate and Water System – Public Disclosure Version

Inventor: Robert James Angus

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Disclosure Type: Non-commercial Public Disclosure

This invention is patent pending under multiple provisional patent applications filed with the United States Patent and Trademark Office. As of this date, the technical concept and supporting information are disclosed for the purpose of establishing prior art and enabling public understanding of the invention.

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Summary of Invention

The invention relates to a compact, portable system that provides off-grid cooling, heating, and atmospheric water generation using ultra-low power. It utilizes thermoelectric cooling modules, a thermally optimized maze structure, and smart airflow to produce essential environmental control in disaster zones, off-grid areas, or low-resource regions.

The system is modular, scalable, and deployable in extreme climates — enabling daily water collection and climate regulation in power-scarce or grid-disconnected environments.

Key Features

- Three-in-one functionality: cooling, heating, and water-from-air (AWG)
- Designed to reduce power grid usage by up to 70–90% compared to conventional systems
- Graphene-coated aluminum heat maze with pin-finned channels for thermal efficiency
- Programmable smart control (temperature, humidity thresholds)
- Insulated, portable design (models from ~15 to 150 lbs)
- Ideal for use in homes, relief shelters, mobile camps, or survival kits
- Scalable from personal use to multi-person support
- Designed for environments like deserts, disaster areas, and remote regions

Licensing Notice

Commercial use, manufacturing, resale, or derivative integration of this system requires a commercial licensing agreement.

Interested companies, NGOs, or governments may contact the inventor to obtain terms for licensing, customization, or volume deployment.

Contact: Licensing@RobertAngus.org